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(54) DEVICE FOR TRANSFERRING FILM

VORRICHTUNG ZUM ÜBERTRAGEN EINES FILMES

DISPOSITIF POUR LE TRANSFERT DE FILMS D'EFFACEMENT

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(56) References cited:
EP-A- 0 072 779 JP-A-63 084 998
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Description

The present invention relates to a coating film transfer tool for transferring a coating film such as a corrective coating layer and an adhesive layer on a coating film transfer tape onto paper surface or the like.

As an example of this kind of coating film transfer tool, there has hitherto been known a tool for erasing characters or the like as disclosed in JP-A-57370/1986. As seen from Fig. 6, this erasing tool comprises a case 1, two supporting shafts 2 and 3 embedded therein, which have set thereon a pay-out reel 5 with a coating film transfer tape 4 wound thereon and a winding reel 6 for winding a used coating film transfer tape 4 to be freely rotatable. A peak-shaped coating film transfer head 7 with a peak portion 8 projects out of the case 1; one end of the coating film transfer tape 4 fed from the pay-out reel 5 is led past a guide pin 9 and turned back by the peak portion 8 and wound by the winding reel 6. The winding reel 6 has fixed thereto a winding dial 10, a part of which is projecting out of the case 1 for manipulation. The coating film transfer tape 4 has a layer of white corrective paint formed on one side thereof over a release agent layer and a layer of adhesive thereupon, and is wound with the adhesive layer outward.

For erasing characters or the like by the use of the erasing tool of the above composition, the case 1 is held with both sides in a hand with the head 7 facing downward and, with the coating film transfer tape 4 being pressed against characters or the like to be erased by the peak portion 8 of the head 7, the case 1 is moved in the longitudinal direction (the direction of the arrow "a" in the figure). The corrective paint layer of the coating film transfer tape 4 is then pressed by the peak portion 8 onto the characters or the like, the corrective paint layer being released from the substrate film with the release agent layer and transferred thereon. As the case 1 moves, a new coating film transfer film 4 is fed from the pay-out reel 5 and, thus, the desired length of the corrective paint layer being transferred on the characters or the like for erasing thereof. The used substrate tape with only the adhesive agent layer remaining thereon is wound by the winding reel 6 with care lest it should slacken by means of the winding dial 10.

The prior art erasing tool described above, which had to be moved in the longitudinal direction of the coating film transfer tape 4 with both sides of the case 1 held with fingers, had something to be desired about stability and reliability since the elbow had to be lifted and there was a problem that it was difficult to set the peak precisely where erasing had to be done.

The present invention relates to improvement of the prior art erasing tool in which the case is moved perpendicular to the longitudinal direction of the coating film transfer tape so as to provide a coating film transfer tool with which erasing et cetera can be done stably and reliably.

In order to attain the above-mentioned object, the

present invention provides a coating film transfer tool with the features of the accompanying claims.

In the coating film transfer tool of the above-mentioned construction, a coating film transfer tape is used, for example, a substrate tape with a paint film formed on one side thereof over a release agent layer, and an adhesive layer formed thereon. In order to transfer the paint layer of the coating film transfer tape onto the paper surface, the coating film transfer tape passes the peak portion of the head and is twisted by 90°, wherein the case has to be moved in a direction perpendicular to the longitudinal direction of the coating film transfer tape with said tape being pressed against the paper surface or the like by the peak portion of the head. It is thereby possible that the coating film of the paint coating film transfer tape under the peak portion of the head is stuck to the paper surface, at the same time, being released from the substrate tape. As the case moves, a new coating film transfer tape is fed from the pay-out reel and it is supplied to the peak portion of the head after being twisted by 90° on this side of the head. Thus, the desired length of the paint layer of the coating film transfer tape is transferred onto the paper surface or the like. The used substrate tape with the release layer alone remaining thereon is wound by the winding reel with the twisting restored.

If, as another example of the coating film transfer tape, an adhesive agent layer alone is formed on one side of the substrate tape over a release agent layer, the adhesive agent layer alone is transferred onto the paper surface or the like and, in this way, the present invention may be used as a pasting tool.

Fig. 1 is a front view of an embodiment of the present invention with the lid removed.

Fig. 2 is a sectional view taken along the line X-X of Fig. 1.

Fig. 3 is a front view of another embodiment of the invention with a portion thereof cut off.

Fig. 4 is a sectional view taken along the line Y-Y of Fig. 3.

Fig. 5 is a front view of a clutch arm of the above-mentioned another embodiment.

Fig. 6 is a front view of an example of prior-art coating film transfer tool with the lid removed.

Described below is an embodiment of the present invention with reference to Figs. 1 and 2.

As seen from Figs. 1 and 2, three supporting shafts 12, 13, 14 embedded in a case 11 support freely rotatable thereon a pay-out reel 15, a winding reel 16 and a winding dial 17 and at the front end of the case 11 there is provided projectingly a coating film transfer head 18, and the pay-out reel 15 has wound thereon a coating film transfer tape 19.

The case 11 has formed therein slits 20 through which the coating film transfer tape 19 passes at the base of the head 18 on both sides thereof (See Fig. 2.), three guide pins 21, 22, 23 and ratchet arm 24 are provided and the side opening is closed by the lid 25 (See

Fig. 2.). Ratchet arm 24 has stopper claws 27 formed at the ends of a pair of elastic arms 26, these stopper claws 27 are engaged with claws 29 of two ratchet wheels 28 described later freely disengageable by the elasticity of the elastic arms 26 to prevent free rotation of the pay-out reel 15 and the winding reel 16.

The pay-out reel 15 and winding reel 16 have formed monobloc therewith the ratchet wheels 28 having a multiplicity of the claws 29. The winding dial 17 has formed monobloc therewith a ratchet wheel 30 and a multiplicity of claws 31 formed on the outer periphery of the ratchet wheel 30 are engaged with the claws 29 of the ratchet wheel 28 of the winding reel 16.

The head 18 is peak-shaped as shown in Fig. 2 and is made up of a triangle-sectioned peak portion 32 with guide flanges 33 formed on both sides thereof.

The coating film transfer tape 19 has one end thereof fed before use from the pay-out reel 15 via the guide pin 21, is twisted by 90° by the guide pin 22 ahead of the head 18 to be led out through one slit 20 and then past the peak portion 32 of the head 18 through the other slit 20 into the case 11 and, with the twisting restored before it reaches the guide pin 23, is wound on the wind reel 16. Then, needless to say, it is to be so set that the coating film to be transferred should be on the outside of the loop.

The twisted tape may as well be further twisted by 90° instead of being restored to the original state.

When the coating film transfer tool of the above-mentioned construction is used as an eraser of characters or the like, the coating film transfer tape 19 may, for example, be made by forming, on one side of a substrate film (25~38 µm) of plastic such as polyester film and acetate film a release agent layer of, for example, vinyl chloride-vinyl acetate copolymer and low-molecular polyethylene, a white corrective paint layer thereon and an adhesive agent (pressure-sensitive adhesive agent) such as polyurethane oil top thereof.

In order to erase characters or the like with this coating film transfer tape 19, the coating film transfer tape 19 passes the peak portion 32 of the head 18 with being twisted by 90°, hence the case 11 has to be moved in a direction perpendicular to the longitudinal direction of the coating film transfer tape 19 (the direction of the arrow A in Fig. 2) with the adhesive layer side of the coating film transfer tape 19 being pressed against characters or the like by the peak portion 32. Then, the corrective paint layer of the coating film transfer tape 19 is stuck onto characters or the like by the adhesive agent layer and it is released from the substrate film by means of the release agent layer formed thereon. As the case 11 moves, a new coating film transfer tape 19 is fed from the pay-out reel 15. Then, the tension of the coating film transfer tape 19 acts on the pay-out reel 15 as torque, the stopper claws 27 are disengaged from the claws 29 of the ratchet wheel 28 by the elasticity of the elastic arm 26, this allowing rotation of the pay-out reel 15. Thus, the corrective paint layer is

transferred onto characters or the like for erasing thereof.

The used substrate tape with the release agent layer alone remaining thereon is wound unslackened by the winding reel 16 which is driven to rotate by the winding dial 17 through the claws 29, 31 of both ratchet wheels 28, 30 in engagement. In this case, as in the case of feeding, the stopper claws 27 are disengaged from the claws 29 of the ratchet wheel 28 by the elasticity of the elastic arm 26, this allowing rotation of the winding reel 16.

When the coating film transfer tool of the above construction is used as a pasting tool, a substrate tape with an adhesive layer alone formed over a release agent layer on one side thereof is to be used instead of the coating film transfer tape 19. The adhesive layer alone is then transferred onto the paper surface in the same manner as in the case of the erasing tool described above to enable pasting.

Although in this embodiment the used coating film transfer tape 19 is wound by the winding reel 16 manually, it is also possible to do it automatically as shown in Figs. 3~5. In Figs. 3~5, however, like parts shown in Figs. 1 and 2 are to be designated by like symbols.

In this embodiment, as shown in Figs. 3 and 4, a pay-out reel 41 and a winding reel 42 are supported free to rotate on the supporting shafts 12 and 13 embedded in the case 11. The pay-out reel 41 is made up of a rim 44 with a large gear 43 formed on its outer periphery, a center boss 45, four radial spokes 46 connecting the rim and the boss and the pay-out cylinder 47 set on the outer periphery of the boss 45 free to rotate, and the coating film transfer tape 19 wound on the outer periphery of the pay-out cylinder 47. The boss 45 is made up of an inner cylinder 48 and outer cylinder 49 with a given gap therebetween, the base end of the outer cylinder 49 connected with the inner cylinder 48 and the supporting shaft 12 inserted through the through hole of the inner cylinder 48 free to rotate.

On the side wall of the outer cylinder 49, as shown in Fig. 5, there are formed a pair of clutch arms 51 having clutch claws 50 at its forward end and the clutch claws 50 are engaged disengageably by the elasticity of the clutch arm 51 with a plurality of claws 52 formed annularly on the forward inner periphery of the pay-out cylinder 47. Amid between confronting pairs of spokes 46, there are formed a pair of arc-shaped ratchet arms 54 having stopper claws 53 at its forward end; the stopper claws 53 are engaged with a plurality of claws 55 formed annularly on the inside of the case 11 freely disengageable by the elasticity of the ratchet arm 54, thus preventing free rotation of the pay-out reel 41 and the winding reel 42.

Meanwhile, the winding reel 42 is made up of a tape-guiding flange 57 on the base end of the winding cylinder 56 with the used coating film transfer tape 19 wound on its outer periphery and a small gear 58 on the back of the flange 57 engaging with the large gear 43,

and a supporting shaft 13 is set freely rotatable through the through hole of the winding cylinder 56.

When, in the above-mentioned makeup, the coating film transfer tape 19 is fed from the pay-out reel 41, the tension of the coating film transfer tape 19 acts as a torque on the pay-out reel 41 and the stopper claw 53 is disengaged from the claw 55 by the elasticity of the ratchet arm 54, this allowing rotation of the pay-out reel 41. Hence, the pay-out reel 41 rotates the winding reel 42 via the large and small gears 43, 58, and the used coating film transfer tape 19 is wound by the winding reel 42 automatically. The pay-out speed decreases when the outer diameter of the coating film transfer tape 19 on the pay-out reel 41 becomes smaller as the tool is used, however, the winding speed increases with the outer diameter of the coating film transfer tape 19 on the winding reel 42 getting larger. If this is allowed to continue, the coating film transfer tape 19 is bound to break in time, hence the pay-out speed has to be synchronized with the winding speed.

Hence, as the torque acting on the pay-out reel 41 increases, the clutch claws 50 are disengaged from the claws 52 by the elasticity of the clutch arm 51 and the pay-out speed is synchronized with the winding speed with the pay-out cylinder 47 sliding against the outer cylinder 49. Thus, the used coating film transfer tape 19 is smoothly wound automatically.

Needless to say, however, the sliding mechanism is not limited to that described above.

Since in this invention, as described above, the coating film transfer tape is twisted ahead of the head by 90°, the direction of movement of the coating film transfer tool is perpendicular to the longitudinal direction of the coating film transfer tape. Hence, with both sides of the tool held in a hand, it is possible to do erasing or adhesive coating by moving the tool horizontally with the elbow on the desk top or the like, that is, without lifting the elbow, and therefore, the head of the tool can be located to the desired position accurately and stably. Also, according to the present invention, coupled with the prior art, the tool can be worked in two alternative directions, this allowing the operator to have a broader choice of mode of working and giving the diversity to the coating film transfer tool.

Claims

1. A coating film transfer tool comprising:

a pay-out reel (15, 41), being rotatably provided in a case (11) and holding a coating film transfer tape (19),

a coating film transfer head (18) including a peak portion (32) having a linear outer edge, and being projected at the front end of the case (11), for pressuring the coating film transfer tape (19) paid out from the pay-out reel (15, 41) onto a transfer area, and

a winding reel (16, 42), being rotatably provided in the case (11), and having an axis parallel to that of the pay-out reel (15, 41), for recovering the coating film transfer tape (19) after use, being led around the peak portion (32) of the head (18) having a linear outer edge,

wherein the linear outer edge of the peak portion (32) of the head (18) is arranged in a direction perpendicular to the axes of the reels (15, 16, 41, 42).

2. A coating film transfer tool of claim 1,
wherein the peak portion (32) is of triangular section, the outer edge of which being a front end pressurizing part of the head (18).

3. A coating film transfer tool of claim 1 or 2,
wherein the case (11) has a shape and size suitable for holding and manipulating by one hand, and is formed in a flat box having the contour shape and size and width size for accommodating the pay-out reel (15, 41) and winding reel (16, 42), its flat face and back sides are gripping surfaces.

4. A coating film transfer tool of claim 1, 2 or 3,
wherein twisting means (21, 22, 23) for twisting the coating film transfer tape (19) is provided between the head (18) and both the reels (15, 16, 41, 42), and

the coating film transfer tape (19) paid out from the pay-out reel (15, 41) is twisted by this twisting means by an angle of 90 degrees at the upstream side of the head (18), and is restored to the original state at the downstream side of the head (18), after passing through the front end pressurizing part of the head (18) and is taken up on the winding reel (16, 42).

5. A coating film transfer tool of claim 1, 2 or 3,
wherein twisting means (21, 22, 23) for twisting the coating film transfer tape (19) is provided between the head (18) and both the reels (15, 16, 41, 42), and

the coating film transfer tape (19) paid out from the pay-out reel (15, 41) is twisted by this twisting means by an angle of 90 degrees at the upstream side of the head (18), and is further twisted by 90 degrees at the downstream side of the head (18), after passing through the front end pressurizing part of the head (18), and is taken up on the winding reel (16, 42).

6. A coating film transfer tool of any of claims 1 to 5,
wherein the coating film transfer tape (19) is constituted by forming a release agent layer on one side of a base film, forming a white corrective paint layer thereon, and applying a pressure sensitive

- adhesive layer further thereon.
7. A coating film transfer tool of any of claims 1 to 5,
wherein the coating film transfer tape (19) is
constituted by forming a release agent layer on one
side of a base film, and forming an adhesive layer
thereon. 5
8. A coating film transfer tool of any of claims 1 to 7,
wherein a winding dial (17) engaged with the
winding reel (16) is rotatably supported in the case
(11), and a part of its outer circumference is used
as a winding operation part (30) opposite to the out-
side of the case (11), thereby forming the winding
reel (16) in manual winding type. 10
9. A coating film transfer tool of claim 8,
wherein rotation preventive means for pre-
venting free rotation of both the reels (15, 16) is pro-
vided, and
this rotation preventive means comprises
ratchet arms (24) provided inside of the case (11),
and ratchet wheels (28) provided on both the reels
(15, 16) so as to be detachably engaged with the
ratchet arms (24). 15
10. A coating film transfer tool of any of claims 1 to 7
wherein both the reels (41, 42) are engaged
with each other, and the winding reel (42) is inter-
locked with the pay-out reel (41) in automatic wind-
ing type. 20
11. A coating film transfer tool of claim 10,
wherein rotation preventive means for pre-
venting free rotation of both the reels (41, 42) is pro-
vided, and
this rotation preventive means comprises a
claw unit (53, 55) furnished with plural stopper
claws (55) provided annually on the inner side of
the case (14), and ratchet arms (54) disposed on
the pay-out reel (41) so as to be detachably
engaged with the claw unit (53, 55). 25
12. A coating film transfer tool of claim 10 or 11,
wherein sliding means (50, 51, 52) for syn-
chronizing the pay-out speed of the pay-out reel
(41) and winding speed of the winding reel (42) is
provided. 30
13. A coating film transfer tool of claim 12,
wherein the boss (45) of the pay-out reel
(41) is rotatably supported on the supporting shaft
(12) provided on the case (11), a pay-out cylinder
(47) for holding the coating film transfer tape (19) is
rotatably provided on the outer circumference of the
boss (45), and the sliding means (50, 51, 52) is
interposed between the pay-out cylinder (47) and
the boss (45). 35
14. A coating film transfer tool of claim 13,
wherein the sliding means comprises clutch
arms (51) provided on the outer circumference of
the boss (45), and a claw unit having plural claws
(52) provided on the entire inner circumference of
the pay-out cylinder (47), so that the clutch arms
(51) and the claw unit are engaged with each other
elastically and detachably. 40

Patentansprüche

1. Beschichtungsfilm-Übertragungsvorrichtung mit:
einer Abwickelpule (15,41), die drehbar in
einem Gehäuse (11) vorgesehen ist und ein
Beschichtungsfilm-Übertragungsband (19)
hält,
einem Beschichtungsfilm-Übertragungskopf
(18), der einen Spitzenabschnitt (32) aufweist,
der eine lineare Außenkante aufweist und am
Vorderende des Gehäuses (11) vorsteht, um
das von der Abwickelpule (15,41) abgespülten
Beschichtungsfilm-Übertragungsbandes (19) auf eine Übertragungsfläche aufzudrücken, und
einer Aufwickelpule (16,42), die drehbar in
dem Gehäuse (11) vorgesehen ist und eine
Achse parallel zu der Abwickelpule (15,41)
aufweist, zum Aufnehmen des Beschichtungs-
film-Übertragungsbandes (19) nach dem
Gebrauch, das um den Spitzenabschnitt (32)
des Kopfes (18) herumgeführt wird, der eine
lineare Außenkante aufweist,
wobei die lineare Außenkante des Spitzenab-
schnittes (32) in einer Richtung angeordnet ist,
die im wesentlichen senkrecht zu den Achsen
der Spulen (15,16,41,42) ist. 45
2. Beschichtungsfilm-Übertragungsvorrichtung nach
Anspruch 1, wobei der Spitzenabschnitt (32) einen
dreieckigen Querschnitt hat, wobei die Außenkante
das druckbeaufschlagende Vorderendteil des Kopfes (18) ist. 50
3. Beschichtungsfilm-Übertragungsvorrichtung nach
Anspruch 1 oder 2, wobei das Gehäuse (11) eine
Gestalt und Größe aufweist, die geeignet ist, es mit
einer Hand zu halten und zu bedienen, und als fla-
cher Behälter ausgebildet ist, der eine Umrißform
und -größe und Breitenabmessung zum Unterbrin-
gen der Abwickelpule (15,41) und der Aufwickelpule
(16,42) aufweist, wobei die ebenflächigen
vorderen und hinteren Seiten Griffoberflächen sind. 55
4. Beschichtungsfilm-Übertragungsvorrichtung nach
Anspruch 1, 2 oder 3, wobei Verdrehleinrichtungen
(21,22,23) zum Verdrehen des Beschichtungsfilm-
Übertragungsband (19) zwischen dem Kopf (18)

- und den beiden Spulen (15,16,41,42) vorgesehen sind, und das von der Abwickelpule (15,41) abgespulte Beschichtungsfilm-Übertragungsband (19) von diesen Verdrehleinrichtungen an der stromaufwärtigen Seite des Kopfes (18) um einen Winkel von 90 Grad verdreht wird und an der stromabwärtigen Seite des Kopfes (18) in den ursprünglichen Zustand rückgestellt wird, nachdem es durch den druckbeaufschlagenden Vorderendteil des Kopfes (18) gegangen ist, und auf der Aufwickelpule (16,42) aufgenommen wird.
- 5
5. Beschichtungsfilm-Übertragungsvorrichtung nach Anspruch 1, 2 oder 3, wobei Verdrehleinrichtungen (21,22,23) zum Verdrehen des Beschichtungsfilm-Übertragungsband (19) zwischen dem Kopf (18) und beiden der Spulen (15,16,41,42) vorgesehen sind, und das von der Abwickelpule (15,41) abgespulte Beschichtungsfilm-Übertragungsband (19) von diesen Verdrehleinrichtungen an der stromaufwärtigen Seite des Kopfes (18) um einen Winkel von 90 Grad verdreht wird und an der stromabwärtigen Seite des Kopfes (18) weiter um 90 Grad verdreht wird, nachdem es durch den druckbeaufschlagenden Vorderendteil des Kopfes (18) gegangen ist, und auf der Aufwickelpule (16,42) aufgenommen wird.
- 10
6. Beschichtungsfilm-Übertragungsvorrichtung nach einem der Ansprüche 1 bis 5, wobei das Beschichtungsfilm-Übertragungsband (19) durch Bilden einer Trennmittelschicht auf einer Seite eines Basisfilms, Bilden einer weißen Korrekturfarbschicht darauf und ferner darauf Aufbringen einer druckempfindlichen Klebemittelschicht aufgebaut ist.
- 15
7. Beschichtungsfilm-Übertragungsvorrichtung nach einem der Ansprüche 1 bis 5, wobei das Beschichtungsfilm-Übertragungsband (19) durch Bilden einer Trennmittelschicht auf einer Seite eines Basisfilms, und Bilden einer Klebemittelschicht darauf aufgebaut ist.
- 20
8. Beschichtungsfilm-Übertragungsvorrichtung nach einem der Ansprüche 1 bis 7, wobei eine Aufwickscheibe (17), die in Eingriff mit der Aufwickelpule (16) ist, drehbar in dem Gehäuse (11) gehalten ist und ein Teil ihres äußeren Umfangs als ein Aufwickelbedienteil (30) dient, das der Außenseite des Gehäuses (11) gegenüberliegt, wodurch die Aufwickelpule (16) für eine manuelle Aufwickelart ausgebildet ist.
- 25
9. Beschichtungsfilm-Übertragungsvorrichtung nach Anspruch 8, wobei eine Drehverhinderungseinrichtung zum Verhindern einer freien Drehung der beiden Spulen (15,16) vorgesehen ist, und wobei
- 30
10. Beschichtungsfilm-Übertragungsvorrichtung nach einem der Ansprüche 1 bis 7, wobei die beiden Spulen (41,42) miteinander in Eingriff sind, und die Aufwickelpule (42) mit der Abwickelpule (41) in einer automatischen Aufwickelart verknüpft ist.
- 35
11. Beschichtungsfilm-Übertragungsvorrichtung nach Anspruch 10, wobei eine Drehverhinderungseinrichtung zum Verhindern einer freien Drehung der beiden Spulen (41,42) vorgesehen ist, und diese Drehverhinderungseinrichtung eine Klaueneinheit (53,55), die mit mehreren Halteklauen (55) ausgestattet ist, die ringförmig an der Innenseite des Gehäuses (11) vorgesehen sind, und Sperrklinkenarme (54) aufweist, die an der Abwickelpule (41) angeordnet sind, so daß sie lösbar in Eingriff mit der Klaueneinheit (53,55) sind.
- 40
12. Beschichtungsfilm-Übertragungsvorrichtung nach Anspruch 10 oder 11, wobei Rutscheinrichtungen (50,51,52) zum Synchronisieren der Abspulgeschwindigkeit der Abwickelpule (41) und der Aufwickelgeschwindigkeit der Aufwickelpule (42) vorgesehen sind.
- 45
13. Beschichtungsfilm-Übertragungsvorrichtung nach Anspruch 12, wobei die Nabe (45) der Abwickelpule (41) drehbar an der Haltwelle (12) gehalten wird, die an dem Gehäuse (11) vorgesehen ist, ein Abspulzylinder (47) zum Halten des Beschichtungsfilm-Übertragungsbandes (19) drehbar am äußeren Umfang der Nabe (45) vorgesehen ist, und Rutscheinrichtungen (50,51,52) zwischen dem Abspulzylinder (47) und der Nabe (45) angeordnet sind.
- 50
14. Beschichtungsfilm-Übertragungsvorrichtung nach Anspruch 13, wobei die Rutscheinrichtungen Greifarme (51), die am äußeren Umfang der Nabe (45) vorgesehen sind, und eine Klaueneinheit aufweist, die mehrere Klauen (52) aufweist, die am gesamten inneren Umfang des Abspulzyinders (47) vorgesehen sind, so daß die Greifarme (51) und die Klaueneinheit elastisch und lösbar miteinander in Eingriff sind.
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Revendications

- Outil de transfert de pellicule de revêtement comprenant :

- un dévidoir (15, 41) monté de façon rotative dans un boîtier (11) et comportant une bande de transfert de pellicule de revêtement (19),
 une tête de transfert de pellicule de revêtement (18) y compris une portion de pic (32) comportant un bord extérieur linéaire, et faisant saillie sur l'extrémité avant du boîtier (11) pour mise sous pression de la bande de transfert de pellicule de revêtement (19) dévidée par le dévidoir (15, 41) sur la zone de transfert, et
 une bobine enrouleuse (16, 42) montée de façon rotative sur le boîtier (11) et comportant un axe parallèle à celui du dévidoir (15, 41) pour récupérer la bande de transfert de pellicule de revêtement (19) après utilisation, qui est amenée autour de la portion de pic (32) de la tête (18) comportant un bord extérieur linéaire, le bord extérieur linéaire de la portion de pic (32) de la tête (18) étant disposé dans une direction perpendiculaire aux axes des bobines (15, 16, 41, 42).
 5
2. Outil de transfert de film de revêtement selon la revendication 1, dans lequel
 10 la portion de pic (32) est de section triangulaire, le bord extérieur étant une partie sous pression d'extrémité avant de la tête (18).
 15
3. Outil de transfert de pellicule de revêtement selon la revendication 1 ou 2, dans lequel
 20 le boîtier (11) a une forme et une taille lui permettant d'être tenu et manipulé d'une seule main et il est réalisé sous forme de boîtier plat avec une forme de contour et une taille et largeur permettant de recevoir le dévidoir (15, 41) et la bobine enrouleuse (16, 42), sa face plate et ses côtés arrière étant des surfaces de préhension.
 25
4. Outil de transfert de pellicule de revêtement selon la revendication 1, 2 ou 3, dans lequel
 30 des moyens de torsion (21, 22, 23) destinés à imprimer une torsion sur la bande de transfert de pellicule de revêtement (19) sont disposés entre la tête (18) et entre les deux bobines (15, 16, 41, 42), et
 35 la bande de transfert de pellicule de revêtement (19) dévidée par le dévidoir (15, 41) est mise en torsion par ces moyens de torsion selon un angle de 90° sur le côté amont de la tête (18) et elle est ramenée à son état d'origine sur le côté aval de la tête (18) après avoir traversé la partie de mise sous pression de l'extrémité avant de la tête (18) et elle est reprise par la bobine d'enroulement (16, 42).
 40
5. Outil de transfert de pellicule de revêtement selon la revendication 1, 2 ou 3, dans lequel
 45 les moyens de torsion (21, 22, 23) destinés à imprimer une torsion à la bande de transfert de pellicule de revêtement (19) sont disposés entre la tête (18) et entre les deux bobines (15, 16, 41, 42), et
 50 la bande de transfert de pellicule de revêtement (19) dévidée par le dévidoir (15, 41) est mise en torsion par ces moyens de torsion selon un angle de 90° sur le côté amont de la tête (18) et elle est de plus amenée en torsion de 90° sur le côté aval de la tête (18) après avoir traversé la partie de mise sous pression d'extrémité avant de la tête (18) et est reprise par la bobine enrouleuse (16, 42).
 55
6. Outil de transfert de pellicule de revêtement selon l'une quelconque des revendications 1 à 5, dans lequel
 60 la bande de transfert de pellicule de revêtement (19) est constituée par formation d'une couche d'un agent de séparation sur un côté d'une pellicule de base formant sur celle-ci une couche de peinture correctrice blanche, et en appliquant subséquemment une couche de substance adhésive sensible à la pression.
 65
7. Outil de transfert de pellicule de revêtement selon l'une quelconque des revendications 1 à 5, dans lequel
 70 la bande de transfert de pellicule de revêtement (19) est constituée par la formation d'une couche d'un agent de séparation sur un côté d'un film de base et en y formant une couche de substance adhésive.
 75
8. Outil de transfert de pellicule de revêtement selon l'une quelconque des revendications 1 à 7, dans lequel
 80 un cadran d'enroulement (17) coopérant avec la bobine enrouleuse (16) est monté de façon rotative dans le boîtier (11) et une partie de sa circonférence extérieure sert de pièce d'enroulement (30) en opposition à l'extérieur du boîtier (11), réalisant ainsi pour la bobine enrouleuse (16) un enroulement de type manuel.
 85
9. Outil de transfert de pellicule de revêtement selon la revendication 8, dans lequel
 90 sont prévus des moyens anti-rotation destinés à empêcher la rotation libre des deux bobines

- (15, 16), et
ces moyens anti-rotation comprennent des bras à rochet (24) disposés à l'intérieur du boîtier (11) et des roues à rochet (28) disposées sur les deux bobines (15, 16) afin de coopérer de façon amovible avec les bras de rochet (24). 5
10. Outil de transfert de pellicule de revêtement selon l'une quelconque des revendications 1 à 7, dans lequel 10

les deux bobines (41, 42) coopèrent entre elles et la bobine enrouleuse (42) est interverrouillée avec le dévidoir (41) pour le type d'enroulement automatique. 15
11. Outil de transfert de pellicule de revêtement selon la revendication 10, dans lequel

les moyens anti-rotation destinés à empêcher la rotation libre des deux bobines (41, 42) sont prévus, et 20

ces moyens anti-rotation comprennent une unité à griffes (53, 55) munie de plusieurs griffes d'arrêt (55) disposées annulairement sur le côté intérieur du boîtier (11) et des bras de rochet (54) disposés sur le dévidoir (41) permettant la coopération amovible avec l'unité de griffes (53, 55). 25
30
12. Outil de transfert de pellicule de revêtement selon la revendication 10 ou 11, dans lequel

sont prévus des moyens de coulisser (50, 51, 52) destinés à synchroniser la vitesse de dévidement du dévidoir (41) et la vitesse d'enroulement de la bobine enrouleuse (42). 35
13. Outil de transfert de pellicule de revêtement selon la revendication 12, dans lequel 40

le bossage (45) du dévidoir (41) est monté de façon rotative sur l'axe de support (12) disposé sur le boîtier (11), un cylindre dévidoir (47) destiné à recevoir la bande de transfert de pellicule de revêtement (19) est disposé de façon rotative sur la circonference extérieure du bossage (45) et les moyens de coulisser (50, 51, 52) sont intercalés entre le cylindre de dévidement (47) et le bossage (45). 45
50
14. Outil de transfert de pellicule de revêtement selon la revendication 13, dans lequel

sont prévus des moyens de coulisser qui comprennent des bras de désaccouplement (51) sur la circonference extérieure du bossage (45) et une unité de griffes munie de plusieurs 55
- griffes (52) disposée sur toute la circonference intérieure du cylindre dévidoir (47) de sorte que les bras d'accouplement (51) et l'unité de griffes coopèrent entre eux élastiquement et de façon amovible.

FIG. 1

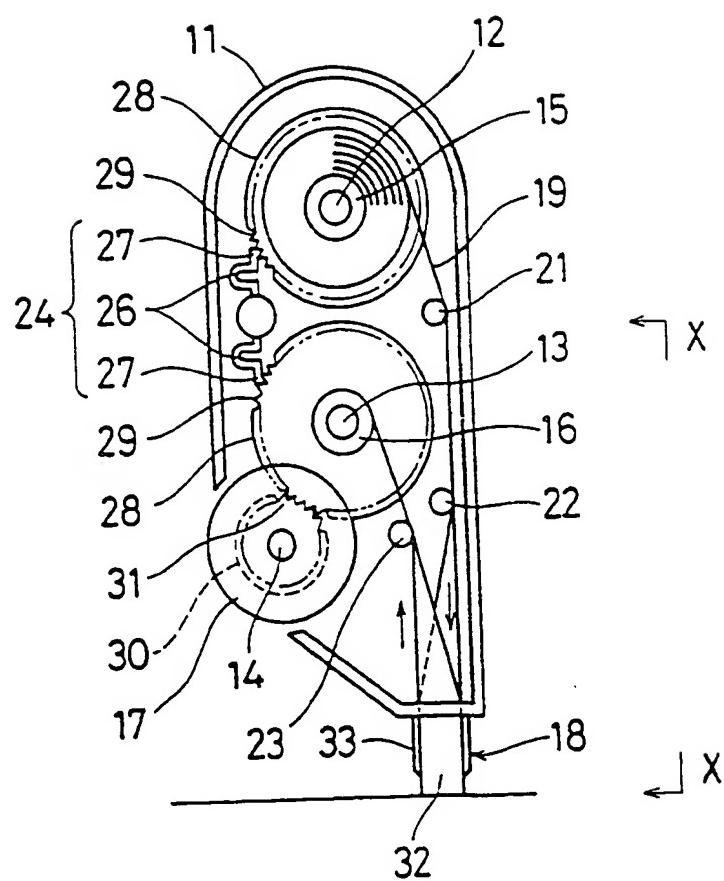


FIG. 2

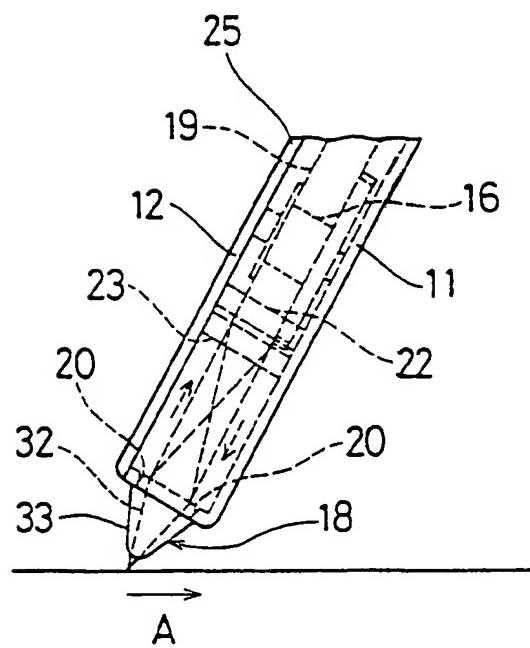


FIG. 3

